

REMARKS

Prior to entry of the present amendment, claims 1-17 were pending in the present application.

With regard to the Restriction Requirement outlined at sections 1-4 of the Office Action, the Applicant affirms the election of Group II, which includes claims 8-11, and Group III, which includes claims 12-17. Claims 1-7 are canceled without traverse, and without prejudice to the filing of divisional or continuation applications.

As such, claims 8-17 are now pending in the present application. Claim 12 is amended above. No new matter is added by the claim amendment. Entry is respectfully requested.

The Applicants note with appreciation that page 12, section 16 of the Office Action indicates that claims 8-11 are allowed.

The Abstract of the disclosure is objected to for reasons stated in the Office Action at page 4, section 5. A marked-up version of the Abstract as amended in Amendment A, filed by Applicant on April 26, 2005, is submitted herewith at page 2 of the present Amendment, and a clean copy of the amended Abstract incorporating the revisions on a separate sheet is submitted herewith as Attachment A. Applicant respectfully submits that the Abstract, as originally filed on July 8, 2003, was in proper conformance with 37 CFR 1.72. Removal of the objection is respectfully requested.

Claims 12-17 are objected to for reasons stated in the Office Action at page 4, third paragraph. Claim 12 is amended in a manner that is believed to overcome the objections. In particular, reference to "the determination result" has been removed from the claim. Entry of the amendment and removal of the objections of claim 12, and claims 13-17 dependent thereon, are respectfully requested.

Claims 12-17 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Yang, *et al.* (U.S. Patent No. 5,546,543 - hereinafter "Yang") in view of Brown, *et al.* (U.S. Patent No. 6,397,287 - hereinafter "Brown"), and further in view of Rudin, *et al.* (U.S. Patent No. 6,014,722 - hereinafter "Rudin") and O'Brien (U.S. Patent No. 5,796,961). Reconsideration and removal of the rejections, and allowance of the claims, are respectfully requested.

In the present invention as claimed in amended independent claim 12, the "occupancy level of data in the receiving buffer" is compared with the "vacancy level of data in the transmitting buffer." It is determined whether the "occupancy level of the receiving buffer" is "increasing" by "comparing the occupancy level of the receiving buffer with a previous receiving buffer occupancy level." It is also determined whether the "vacancy level of the transmitting buffer" is "increasing" by "comparing the vacancy level of the transmitting buffer with a previous transmitting buffer vacancy level." In this manner, access to the system bus is granted to "one of the transmitting buffer and the receiving buffer."

This feature of the method of the present invention is described at least with reference to FIG. 3 of the present specification. In this example, when the present operational state corresponds to the emergency mode, the occupancy level *Rxbuff* of data in the receiving buffer is compared with the vacancy level *Txempty* of data in the transmitting buffer (see FIG. 3, blocks 320, 330 of the present specification). If the occupancy level of data in the receiving buffer is greater than the vacancy level of data in the transmitting buffer, then it is determined whether the occupancy level *Rxbuff* of data in the receiving buffer is increasing (see FIG. 3, block 331). If the occupancy level of data in the receiving buffer is not greater than the vacancy level of data in the transmitting buffer, then it is determined whether the vacancy level *Txempty* of data in the transmitting buffer is increasing (see FIG. 3, block 332). Depending on the comparison at block 330, and depending on the determinations at blocks 331, 332, either the receiving buffer is granted access, $Rxgrant = 1$, or the transmitting buffer is granted access, $Txgrant = 1$, to the system bus at blocks 351, 352, 353, and 354.

It is submitted that the combined teachings of Yang, Brown, Rudin, and O'Brien fails to teach or suggest the present invention as claimed in claim 1. In particular, it is submitted that none of the cited references teaches or suggests "determining if the occupancy level of the receiving buffer is increasing by comparing the occupancy level of the receiving buffer with a previous receiving buffer occupancy level," as claimed. Further, it is submitted that none of the cited references teaches or suggests "determining if the vacancy level of the transmitting buffer is increasing by comparing the vacancy level of the transmitting buffer with a previous transmitting buffer vacancy level," as claimed. The Applicant notes that the Office Action states at page 8, second paragraph that the combination of Yang, Brown, and Rudin does not teach comparing the occupancy level of data in the receiving buffer with the vacancy level of data in the transmitting buffer. It is submitted that the combination of Yang, Brown, and Rudin further fails to teach or suggest "determining if the occupancy level of the receiving buffer is increasing" by "comparing the occupancy level of the receiving buffer with a previous receiving buffer occupancy level," or "determining if the vacancy level of the transmitting buffer is increasing" by "comparing the vacancy level of the transmitting buffer with a previous transmitting buffer vacancy level," as claimed in amended independent claim 12.

With regard to O'Brien, the Office Action at page 8, third paragraph cites O'Brien as comparing the occupancy level of data in the receiving buffer with the vacancy level of data in the transmitting buffer. The Office Action at page 10, section 12 further states, in connection with the rejection of former claim 14, that O'Brien grants access to the system bus if the occupancy level of the receiving or transmitting buffer is "increasing". However, there is no mention in O'Brien of either "determining if the occupancy level of the receiving buffer is increasing" by "comparing the occupancy level of the receiving buffer with a previous receiving buffer occupancy level," or "determining if the vacancy level of the transmitting buffer is increasing" by "comparing the vacancy level of the transmitting buffer with a previous transmitting buffer vacancy level," as claimed in amended independent claim 12. Instead, O'Brien determines a priority for each device requesting access to the data bus, for example, read device A, write device B, read device C, by determining a current capacity (i.e. the "fullness") of

each write device buffer and read device buffer (see O'Brien, FIG. 1, Table 1, and column 4, lines 3-10). There is no determination in O'Brien as to whether the capacities of the devices are increasing.

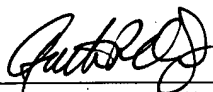
Accordingly, it is submitted that Yang, Brown, Rudin, and O'Brien, taken alone or in combination, fail to teach or suggest the invention set forth in amended independent claim 12. Since the combination of Yang, Brown, Rudin, and O'Brien fails to teach or suggest the invention set forth in amended independent claim 12, the claim is believed to be allowable over the cited references. With regard to dependent claims 13-17, it follows that these claims should inherit the allowability of independent claim 12 from which they depend. Accordingly, reconsideration and removal of the rejections of claims 12-17 under 35 U.S.C. 103(a) based on Yang, Brown, Rudin, and O'Brien, and allowance of claims 12-17 are respectfully requested.

Closing Remarks

It is submitted that all claims are in condition for allowance, and such allowance is respectfully requested. If prosecution of the application can be expedited by a telephone conference, the Examiner is invited to call the undersigned at the number given below.

Respectfully submitted,

Date: November 9, 2005
Mills & Onello, LLP
Eleven Beacon Street, Suite 605
Boston, MA 02108
Telephone: (617) 994-4900, Ext. 4902
Facsimile: (617) 742-7774


Anthony P. Onello, Jr.
Registration Number 38,572
Attorney for Applicant

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